# Service Tool OCI700.1

ACS plant operating software and OCI700 service interface

**Service tool for commissioning and the diagnosis of HVAC controllers of the Synco™, SIGMAGYR® and ALBATROS® ranges.**

## Use

- Commissioning and the diagnosis of the following types of controllers:
  - Synco controllers
  - SIGMAGYR controllers
  - ALBATROS controllers
- Operation of HVAC plant via Konnex (KNX/TP1) or Local Process Bus (LPB)

## Functions

The service tool consists of the ACS plant operating software and the OCI700 service interface.

- The service interface provides signal conversion between the PC's Universal Serial Bus (USB) interface and the controllers' service interface
- The ACS plant operating software provides the following programs and functions:

### Service software

| *Function* | *Description* |
|---|---|
| Operating Booklet | Visualization and remote operation of all data points transmitted by the connected devices |
| – Standard | Pages and data points as predefined for each device |
| – User-defined | Pages and data points as defined by the user |
| Online Trend | Acquisition and presentation of the dynamic behavior of selected plant data points, with connection to the plant |

| | |
|---|---|
| Parameter Settings | Reading and editing the setting parameters of a device in tabular form |
| Commissioning Report | Reading the setting values of individual devices, device groups, or of the entire plant |
| Plant Navigation | Plant view as a tree structure. The makeup of the tree structure corresponds to addressing of the devices. |
| Connection | Directly via standard USB cable (connector type A to B) |

**Operating software**

| *Function* | *Description* |
|---|---|
| Plant Diagram, user-defined | Visualization and remote operation of data points with graphic presentation of plant. Graphic presentation, data points and interconnections as defined by the user |
| Operating Booklet | Visualization and remote operation of all data points transmitted by the connected devices |
| – Standard | Pages and data points predefined for each device |
| – User-defined | Pages and data points as defined by the user |
| Parameter Settings | Reading and editing the setting parameters of a device in tabular form |
| Plant Navigation | Plant view as a tree structure. The makeup of the tree structure corresponds to the addressing of the devices |
| Connection | Directly via standard USB cable (connector type A to B) |

## Equipment combinations

**Devices**

The following types of devices can be operated with the service tool:

Synco

- Heating controllers type RMH7..., RMK7...
- Universal controllers type RMU7..., RLU2...
- Individual room controllers type RXB...
- Room units type QAW7...

SIGMAGYR

- Heating controllers type RVL4..., RVP3..., RVP5...
- District heating controllers type RVD2...
- Central communication units OCI6...

ALBATROS

- Heating controllers type RVA...., RVS...

AEROGYR

- Ventilation controllers type RWI65...

Minimum PC requirements

The minimum requirements placed on the PC are the following:

| *PC component* | *Minimum requirement* |
|---|---|
| Processor | Pentium 100 MHz, recommended 233 MHz |
| RAM | 32 MB, recommended 128 MB |
| Hard disk | Available storage capacity 300 MB, recommended: additional 20 MB per plant |
| Screen | VGA standard driver 800 x 600, 256 colors<br>Recommended: SVGA standard driver 1028 x 768 |
| Interfaces | – USB1.1 and higher or serial COM up to 9,600 Baud (directly or via modem)<br>– Parallel port for copy protection |
| Operating system | – Windows 98, second edition<br>– Windows ME<br>– Windows 2000<br>– Windows XP |

| | |
|---|---|
| | – Windows NT 4.0 service pack 6:<br>Operation with the OCI700 service interface is not possible since Windows NT does not support the USB interface as standard |
| CD-ROM drive | Single |

## Type summary

The service tool is supplied as a complete product. It requires no license.

| *Type reference* | *Copy protection* |
|---|---|
| **OCI700.1** | Not required |

## Ordering and delivery

**Ordering**

When ordering, please give type reference **OCI700.1**.

**Delivery**

The service tool is supplied as a set in a service case.

- CD-ROM with:
  - Operating software
  - Service software
  - Documentation
- Installation Instructions
- OCI700 service interface
- USB cable
- Service cable for Synco controllers
- Service cable for SIGMAGYR and ALBATROS controllers

**Extra packages**

The operating and service software supplied with the OCI700.1 corresponds to that of the ACS700 (refer to Data Sheet CE1N5641en).
Extra packages are used to extend the scope of functions of the standard packages.
Based on the ACS700 standard package, a CMD.01 is required.
For more detailed information, refer to Data Sheet CE1N5640en (ACS7...).

## Documentation

**Software**

| *Type reference* | *Type of documentation and number* |
|---|---|
| **ACS7…** | Basic Documentation CE1P5640en *<br>User Manual CE1U5640en<br>Installation Instructions CE1G5640en |
| **ACS700** | Data Sheet CE1N5641en |
| **ACS712** | Data Sheet CE1N4563en |
| **ACS713** | Data Sheet CE1N5644en |
| **ACS715** | Data Sheet CE1N5645en |
| **ACS741** | Data Sheet CE1N5647en |
| **ACS785** | Data Sheet CE1N5648en |

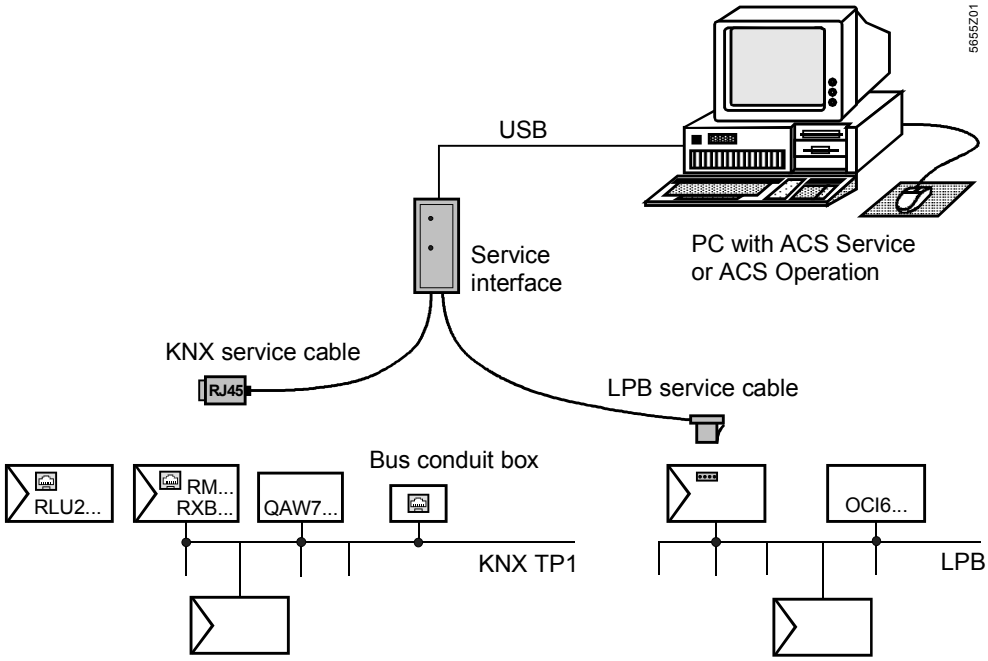
* in preparation

**Standard systems**

| *System* | *Type of documentation and number* |
|---|---|
| ACS600 operating software and OCI600 central communication unit | Basic Documentation CE1P2529en |
| LPB, System Engineering | Basic Documentation CE1P2370E |
| LPB, Basic Engineering Data | Data Sheet CE1N2032E |
| LPB, Basic System Data | Data Sheet CE1N2030E |
| Konnex bus, system description | Basic Document CE1P3110en |

**Communication**

The service or operating software facilitates direct data exchange with the above mentioned devices via the PC's USB interface and the service interface:




- The service interface can communicate via the LPB or the KNX service cable
- Only 1 service interface can be connected to the PC's USB interface at a time
- Connection to the devices can be made as follows:
  - Via the service interface
  - Via the bus (for that, the cable must be appropriately prepared; for details, refer to «Connections»)
  - Via the KNX bus conduit box

**Interfaces**

The service interface has the following ports:

- For USB cable, socket type B
- For KNX service cable, socket RJ45
- For LPB service cable, socket RJ12

**Parameterization of service tool**

- The service interface need not be parameterized
- With the service or operating software, the relevant type of server (OCI700-KNX or OCI700-LPB) must be selected in order to be able to make a connection to the devices

**Diagnosing and commissioning the controllers**

The service or operating software can be used to change or display the following values and parameters of the connected controllers (examples):

- Temperature
- Setpoints
- Limitations
- Operating modes
- Weekly and holiday programs

## Operating software and service software

### General

The operating software and the service software include applications with the following choices:

- Following applications can be started several times and operated in parallel:
  - Plant Diagram
  - Operating Booklet
  - Parameter Settings
  - Online Trend
  - Commissioning Report
- Several applications can be run simultaneously (e.g. Plant Diagram and Operating Booklet)
- Active applications (e.g. Parameter Settings) can operate in the background
- User-defined adjustments can be made on the following applications:
  - Plant Diagram
  - Operating Booklet
- The software contains a device description of every supported device. The device descriptions define:
  - The data points with the associated properties
  - The interconnections between applications

### Plant Diagram

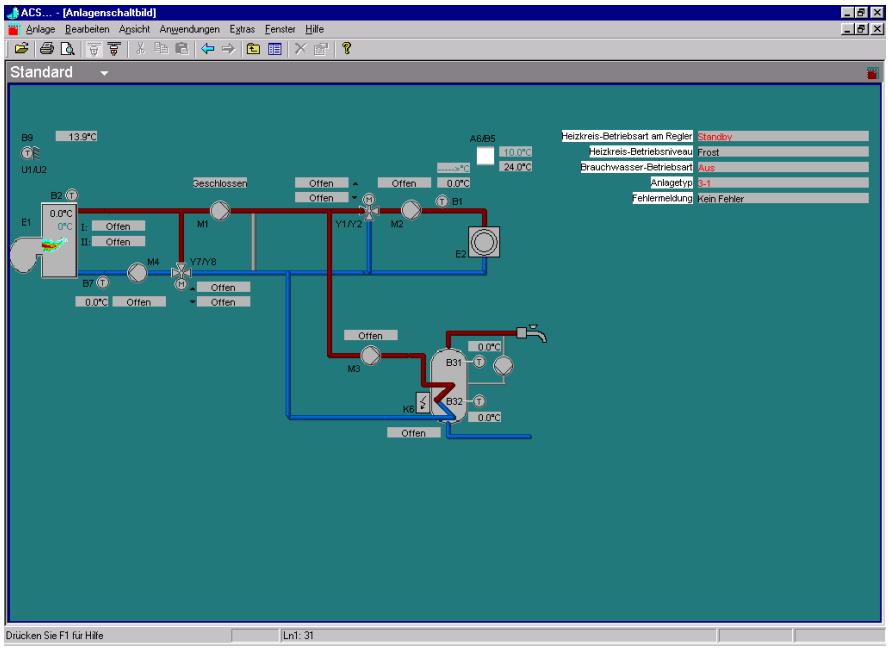
This application permits the graphic presentation of plant (individual devices or groups of devices) with the following choices:

- Automatic updating of process values in the diagram
- Changing setpoints in the diagram
- Links to other diagrams can be established

A user-defined plant diagram can be defined for every device. The procedure is the following:

- Use external graphic software (e.g. Micrografx Picture Publisher™) for the graphic presentation. The graphs can be adopted in bitmap format
- For the inclusion of data points and links, the application has an Editor integrated

All plant diagrams are stored in a library. They can also be created without having a connection to the plant (offline).
The plant diagrams can be printed out.

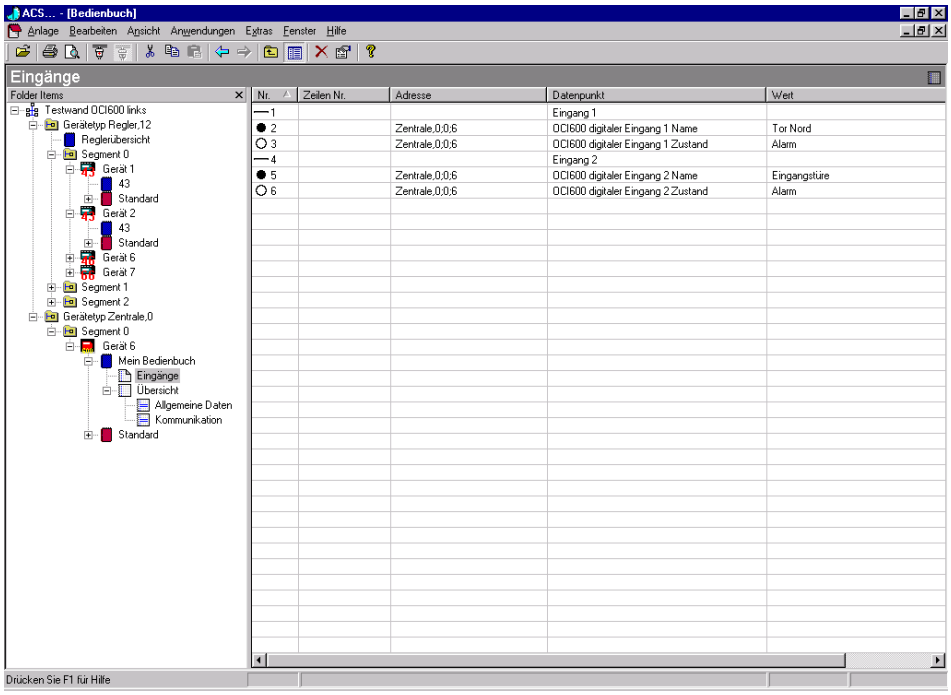


Operating Booklet

This application is used to visualize all transmitted data points of each device, and their values.
Each type of device uses a standard Operating Booklet; makeup and contents of the operating pages are predefined.
User-defined Operating Booklets can be created for each device and each node. Data points of all subordinate devices can be added to an Operating Booklet that is assigned to a node. Standard and user-defined Operating Booklets can be copied to devices of the same type or to superposed nodes.
The user-defined Operating Booklet offers the following features:

- It can consist of several user-defined pages
- Every page can be subdivided into several user-defined sections
- Freely selectable data points and separators can be assigned to the Operating Booklet, the pages and sections

Switching between the standard and the user-defined Operating Booklet is possible at any time.
Every selected page is automatically updated. The updating process is visualized.
The operating pages can be printed out and exported as an ASCII file.

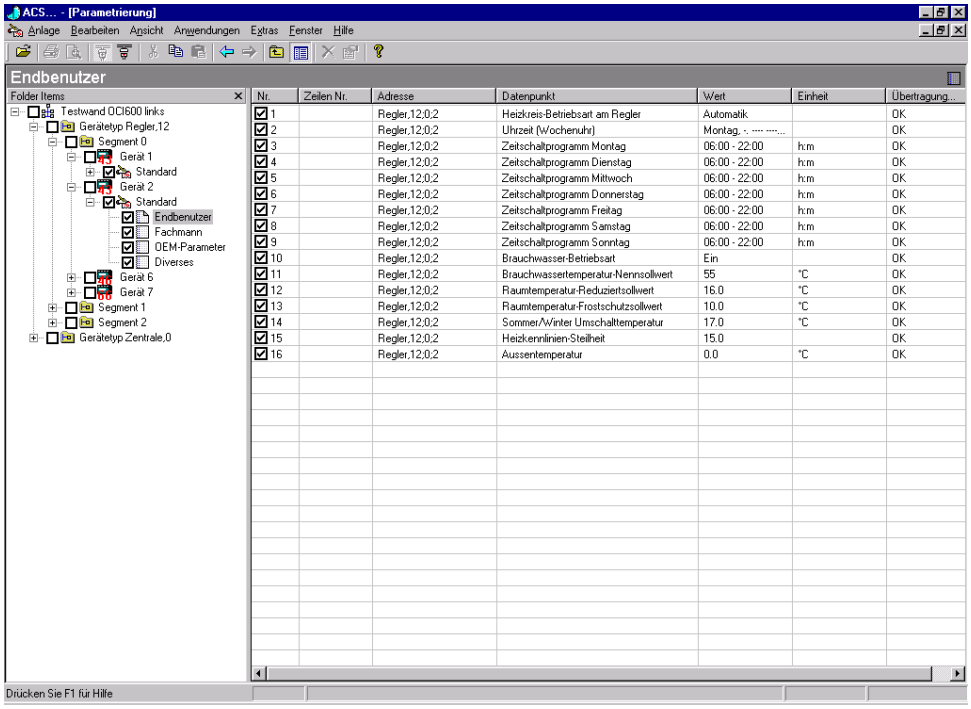



Parameter Settings

This application is used to download, upload or compare the settings of the connected devices.
The settings can be

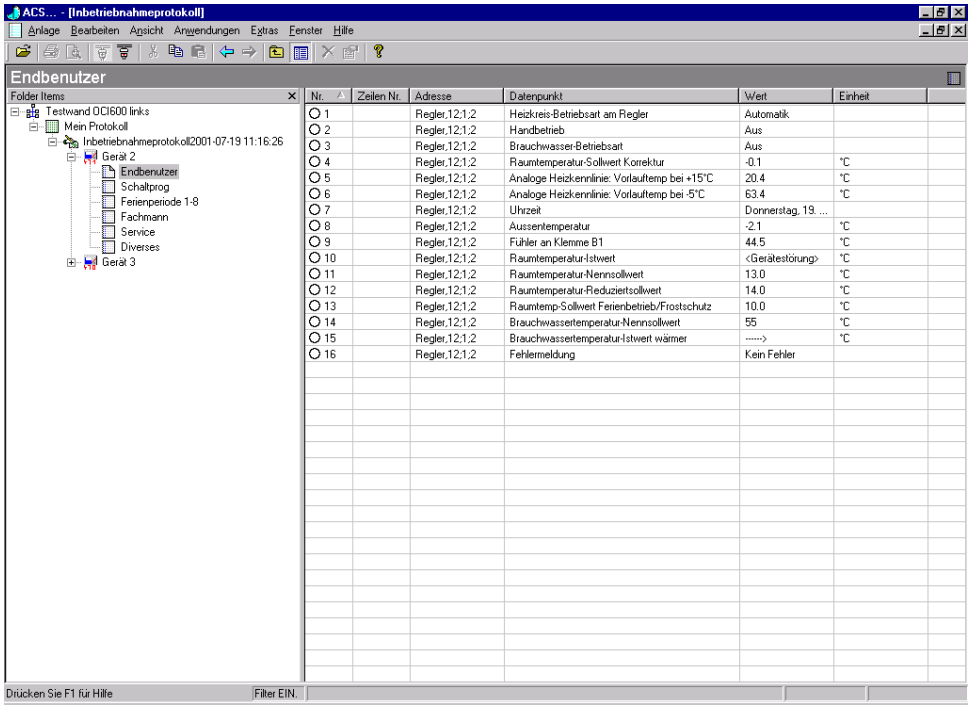
- stored as a parameter set
- compared with a parameter set
- compared with the standard parameter set
- overwritten with a stored parameter set
- overwritten with the standard parameter set

The parameter sets can be edited either online or offline. The data points of a parameter set can be individually selected. The transmitted result of uploading, downloading or comparing is displayed online.
The parameter set can be printed out or exported as an ASCII file.


ACS... - [Parametrierung]
Anlage Bearbeiten Ansicht Anwendungen Extras Fenster Hilfe
Endbenutzer
Folder Items
Testwand OCI600 links
Gerätetyp Regler,12
Segment 0
Gerät 1
Standard
Gerät 2
Standard
Endbenutzer
Fachmann
OEM-Parameter
Diverses
Gerät 6
Gerät 7
Segment 1
Segment 2
Gerätetyp Zentrale,0
Nr. | Zeilen Nr. | Adresse | Datenpunkt | Wert | Einheit | Übertragung...
1 | Regler,12:0:2 | Heizkreis-Betriebsart am Regler | Automatik | | OK
2 | Regler,12:0:2 | Uhrzeit (Wochenuhr) | Montag, -. ---- ----... | | OK
3 | Regler,12:0:2 | Zeitschaltprogramm Montag | 06:00 - 22:00 | h:m | OK
4 | Regler,12:0:2 | Zeitschaltprogramm Dienstag | 06:00 - 22:00 | h:m | OK
5 | Regler,12:0:2 | Zeitschaltprogramm Mittwoch | 06:00 - 22:00 | h:m | OK
6 | Regler,12:0:2 | Zeitschaltprogramm Donnerstag | 06:00 - 22:00 | h:m | OK
7 | Regler,12:0:2 | Zeitschaltprogramm Freitag | 06:00 - 22:00 | h:m | OK
8 | Regler,12:0:2 | Zeitschaltprogramm Samstag | 06:00 - 22:00 | h:m | OK
9 | Regler,12:0:2 | Zeitschaltprogramm Sonntag | 06:00 - 22:00 | h:m | OK
10 | Regler,12:0:2 | Brauchwasser-Betriebsart | Ein | | OK
11 | Regler,12:0:2 | Brauchwassertemperatur-Nennsollwert | 55 | °C | OK
12 | Regler,12:0:2 | Raumtemperatur-Reduziertsollwert | 16.0 | °C | OK
13 | Regler,12:0:2 | Raumtemperatur-Frostschutzsollwert | 10.0 | °C | OK
14 | Regler,12:0:2 | Sommer/Winter Umschalttemperatur | 17.0 | °C | OK
15 | Regler,12:0:2 | Heizkennlinien-Steilheit | 15.0 | | OK
16 | Regler,12:0:2 | Aussentemperatur | 0.0 | °C | OK
Drücken Sie F1 für Hilfe

Commissioning Report

This application is used to log the setting values of individual devices, groups of devices, or entire plants.
The data points of the selected devices are stored with data point designation, value, unit and status.
The commissioning report can be printed out and exported as an ASCII file.

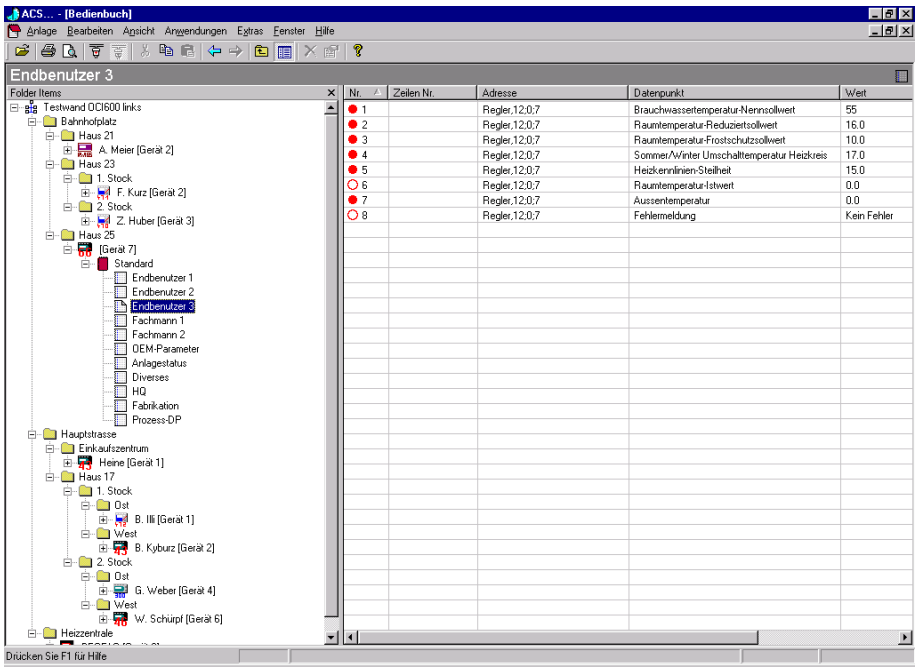

ACS... - [Inbetriebnahmeprotokoll]
Anlage Bearbeiten Ansicht Anwendungen Extras Fenster Hilfe
Endbenutzer
Folder Items
Testwand OCI600 links
Mein Protokoll
Inbetriebnahmeprotokoll2001-07-19 11:16:26
Gerät 2
Endbenutzer
Schaltprog
Ferienperiode 1-8
Fachmann
Service
Diverses
Gerät 3
Nr. | Zeilen Nr. | Adresse | Datenpunkt | Wert | Einheit
1 | Regler,12:1:2 | Heizkreis-Betriebsart am Regler | Automatik
2 | Regler,12:1:2 | Handbetrieb | Aus
3 | Regler,12:1:2 | Brauchwasser-Betriebsart | Aus
4 | Regler,12:1:2 | Raumtemperatur-Sollwert Korrektur | -0.1 | °C
5 | Regler,12:1:2 | Analoge Heizkennlinie: Vorlauftemp bei +15°C | 20.4 | °C
6 | Regler,12:1:2 | Analoge Heizkennlinie: Vorlauftemp bei -5°C | 63.4 | °C
7 | Regler,12:1:2 | Uhrzeit | Donnerstag, 19. ...
8 | Regler,12:1:2 | Aussentemperatur | -2.1 | °C
9 | Regler,12:1:2 | Fühler an Klemme B1 | 44.5 | °C
10 | Regler,12:1:2 | Raumtemperatur-Istwert | <Gerätestörung> | °C
11 | Regler,12:1:2 | Raumtemperatur-Nennsollwert | 13.0 | °C
12 | Regler,12:1:2 | Raumtemperatur-Reduziertsollwert | 14.0 | °C
13 | Regler,12:1:2 | Raumtemp-Sollwert Ferienbetrieb/Frostschutz | 10.0 | °C
14 | Regler,12:1:2 | Brauchwassertemperatur-Nennsollwert | 55 | °C
15 | Regler,12:1:2 | Brauchwassertemperatur-Istwert wärmer | ------> | °C
16 | Regler,12:1:2 | Fehlermeldung | Kein Fehler
Drücken Sie F1 für Hilfe
Filter EIN.

Plant Navigation

For plant navigation, the plant is presented in the form of a tree structure, in accordance with device addressing. The following applications support this mode of presentation:

- Plant Diagram
- Operating Booklet
- Online Trend
- Parameter Settings
- Commissioning Report

The plant view as a tree structure can be displayed or hidden.




## Mechanical design of service interface

**Basic design**

The service interface is accommodated in a compact plastic housing. 2 LEDs indicate the correct functioning of the device. The interfaces of the service interface are galvanically separated.

**USB indication**

LED lit: Operating voltage present at the service interface
LED flashes: Data exchange between service interface and PC

**Bus indication**

LED lit: Connection to the service interface is established
LED flashes: Data exchange via the service interface

**Power supply**

The service interface is powered via the USB interface and the controllers' service interfaces. If used, it shortens the operating time of a laptop's storage battery only to a small extent.

## Notes

**Installation**

The service interface is not designed for fixed mounting.

**Commissioning**

The software should be installed according to the Installation Instructions supplied with the CD.

**Operation**

The ACS plant operating software offers a standard Windows Help function. This means that a description of the commands and menus is available at any time.

## Technical data

| | | |
|---|---|---|
| **Power supply** | Operating voltage (via USB) | DC 5 V as per USB specification |
| | Current draw | max. 26 mA |
| **Norms and standards** | CE conformity to | |
| | EMC directive | 89/336/EEC |
| | Low-voltage directive | 73/23/EEC |
| | C-Tick conformity to | |
| | Australian EMC Framework | Radio communication act 1992 |
| | Electromagnetic compatibility | |
| | Immunity | EN 61000-6-2 and EN 50090-2-2 |
| | Emissions | EN 61000-6-3 and EN 50090-2-2 |
| **Degrees of protection** | Degree of protection | IP20 to EN 60529 |
| **KNX interface** | Connection | (2-wire, **not** interchangeable) |
| | Length of service cable | 3 m |
| | Baud rate | 9,600 Baud |
| | Bus loading number (E) | dynamic / adaptive |
| | Physical Layer RM..., RXB...,QAW7... | TP1 |
| | Physical Layer RL... | 3V (TTL) |
| | For more information about the KNX bus, refer to | Basic Documentation CE1P3110en |
| **LPB interface** | Norm | Batibus-compatible |
| | Connection | (2-wire, **not** interchangeable) |
| | Length of service cable | 3 m |
| | Baud rate | 4,800 Baud |
| | Bus loading number (E) | dynamic / adaptive |
| | For more information about the LPB, refer to | Data Sheet CE1N2032E<br>Data Sheet CE1N2030E<br>Basic Documentation CE1P2370E |
| **USB interface** | Norm | USB V1.1 |
| | Length of service cable | 0.6 m (max. permissible: 5 m) |
| | Device class | HID (Human Interface Device) |
| | Baud rate | max. 12 Mb/s (Full Speed) |
| | Connecting cable | |
| | Connector on PC | USB type A |
| | Connector on OCI700 | USB type B |

**Permissible ambient conditions**

| | | |
|---|---|---|
| Transport | | |
| | Temperature | –25...+70 °C |
| | Humidity | <95 % r.h. (noncondensing) |
| Storage | | |
| | Temperature | –5...+55 °C |
| | Humidity | <95 % r.h. (noncondensing) |
| Operation | | |
| | Temperature | 0...+50 °C |
| | Humidity | <85 % r.h. (noncondensing) |

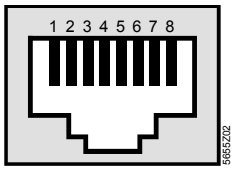
**Weight**

| | |
|---|---|
| Case, complete with packaging | 1.2 kg |

## Connections

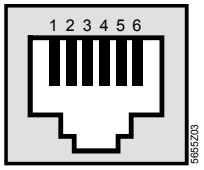
The OCI700 service interface has the following connectors:

**Pin assignment KNX, RJ45**




1 CE+, Konnex
2 CE–, Konnex
3 Not used
4 Not used
5 Voltage input 16 V
6 Transmission line to RLU2...
7 Reception line from RLU2...
PPS RXB...
Identpin RM...
8 Ground

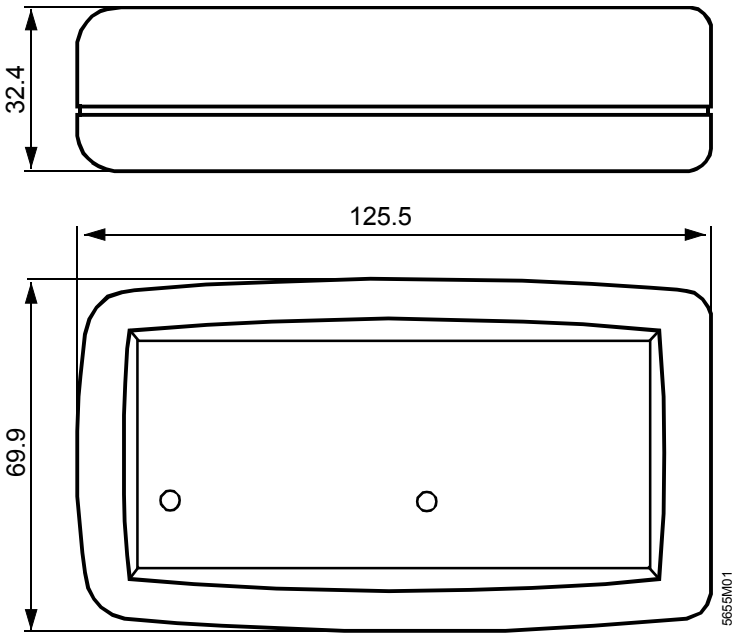
**Pin assignment LPB, RJ12**




1 Not used
2 Not used
3 DB, LPB
4 MB, LPB
5 Identpin
6 Not used

## Dimensions

**Service interface**




Dimensions in mm

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Subject to change